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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,082	11/06/2003	Junji Shirokoshi	Q77943	8230
23373	7590	11/02/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			FIDLER, SHELBY LEE	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/702,082

Applicant(s)

SHIROKOSHI, JUNJI

Examiner

Shelby Fidler

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/6/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

*Claim Rejections - 35 USC § 102*

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Mandel et al. (US 5358238).

**With regards to claim 1**, Mandel teaches an image forming apparatus (col. 1, lines 18-21) which can be used with a plurality of attachment units (mailbox bins, col. 1, lines 28-29), each of which includes a controlled element (sensor units 112, col. 28, line 43), comprising:

a main section (controller 100, col. 21, lines 19-22);

signal lines (col. 13, lines 50-52) which connect the controlled elements to the main section, to thereby realize a communication between each one of said controlled elements and the main section (col. 29, lines 45-47); and

selective control lines (col. 13, lines 50-52) which connect the main section respectively with the attachments units, to thereby select one of the attachments units to which the main section is to communicate (col. 29, lines 48-50 states that the sensors are interrogated to see which bins are empty, requiring that the sensors are selectively controlled);

wherein the main section and the plurality of attachment units in a cascade arrangement (col. 20, lines 24-27) by a line group which contains the signal lines and the selective control lines (col. 28, line 54), and via the line group, communications are

established between the main section and the controlled elements (col. 29, lines 45-47) which are respectively disposed to the plurality of attachment units (col. 28, lines 42-44).

**With regards to claim 8**, Mandel teaches that each of the plurality of attachment units have the same function with each other (col. 1, lines 27-31).

**With regards to claim 9**, Mandel teaches that each of the plurality of attachment units have the same structure with each other (bins 11, Figure 1).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Capri et al. (US 5975515).

**With regards to claim 2**, Mandel teaches selective control lines relative to the main section (col. 29, lines 45-47). Mandel does not teach using a connection count. Capri discloses using a connection count of the attachment units (col. 2, lines 47-48). At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Mandel's invention with the connection count of Capri. The motivation for doing so, as taught by Capri, is so that the main section knows which attachments

units are available since some attachment units are not necessary for the operation of the printer (col. 2, lines 66-67).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mandel in view of Pirie et al. (US 6371672 B1).

**With regards to claim 3**, Mandel teaches control lines and signal lines between the main section and the controlled elements disposed on the attachment units. Mandel does not explicitly teach establishing a current path between the main section and the controlled element via the signal lines in response to the activated control line. Pirie discloses establishing a current path via signal lines between the main section (firmware is read as main section, col. 12, line 33) and the controlled element (multiplexer is read as controlled element, col. 12, lines 35-36), which corresponds to the activated selective control line (col. 12, lines 35-37). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Mandel's invention with Pirie's control and signal lines. The motivation for doing so, as taught by Pirie, is to allow the controlled elements to be individually selectable (col. 10, lines 40-42).

Claims 4 - 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandel in view of Koizumi et al. (US 6297842 B1).

**With regards to claim 4**, Mandel teaches that upstream attachment units are connected to the downstream attachment units, and vice versa (col. 20, lines 24-27 states

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that the attachment units are serially connected). Mandel does not explicitly teach upstream-side connectors, connecting to downstream-side connectors of the attachment units. Koizumi discloses an attachment unit whose upstream side connector electrically connects to the upstream-side connector of another attachment unit (col. 9, lines 13-17), which is closer to the main section (being serially connected, col. 9, line 17); and an attachment unit whose downstream-side connector electrically connects to the upstream-side connector of another attachment unit (col. 9, lines 13-17), which is cascaded on the downstream side which is opposite to the upstream side in the order of connection (being serially connected, col. 9, line 17).

**With regards to claim 5**, Mandel inherently teaches the main section comprising a main-section connector to connect the line group electrically to the attachment unit (Mandel's invention must contain a connector to establish an electrical connection between the main section and attachment units, col. 29, lines 45-47), and the main-section connector and upstream-side connector are structured so as to be connected with the downstream-side connector (being serially connected, col. 20, lines 24-27).

**With regards to claim 6**, Mandel teaches a relay substrate (Mandel uses controlled switching systems which can act as relays, col. 13, lines 50-52) disposed inside each one of the attachment units (col. 28, lines 52-54).

At the time of invention, it would have been obvious to modify Mandel's invention with Koizumi's connection method. The motivation for doing so, as taught

by Koizumi, is to allow the data to be serially shifted through the attachment units (col. 9, lines 16-17).

### *Claim Objections*

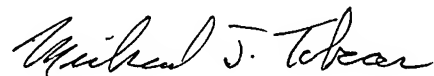
Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The primary reason for indicating allowance of claim 7 is the inclusion of the limitation of the internal wirings installed between the upstream-side and downstream-side connectors in such a manner that the position of a contact in the upstream-side connector assigned to the selective control line is identical between attachment units. It is this limitation found in claim 7, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

*Conclusion*

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SLF



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